

Countering Today's Nuclear Threat: Prevention, Just War Theory, and the Israeli Attack Against the Iraqi Osirak Reactor

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EXECUTIVE SUMMARY

Title: Countering Today's Nuclear Threat: Prevention, Just War Theory, and the Israeli Attack Against the Iraqi Osirak Reactor

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Thesis: Although controversial, the strategy of Prevention is the best option in effectively dealing with anti-American entities seeking to obtain and employ nuclear devices against US interests.

Discussion: The increasing likelihood of anti-American entities using nuclear devices against US interests means that the nuclear threat is increasing, not decreasing. The strategy of Prevention is the most efficient countermeasure against this threat. Prevention is the use of the diplomatic and military elements of national power to deter and disallow our enemies from obtaining the ability to use or threaten to use nuclear devices against US interests. Historically, Prevention has not been implemented as a strategy due to its controversial nature. Specifically, many question whether Prevention is a legitimate and justifiable strategy since it entails striking the enemy before the enemy makes the first military move. However, the 1981 Israeli strike against the Iraqi Osirak reactor reveals that Prevention can be legitimate and justified if it fulfills the seven basic conditions set forth by Just War theorists. Therefore, if the US conducts diplomatic and military offensives against entities seeking to obtain nuclear devices and such actions satisfy all seven basic conditions, then the US government will be justified in fulfilling its duty to defend US interests.

Conclusion(s) or Recommendations:

The US government should implement a strategy of Prevention in order to effectively counter anti-American entities' ambitions to obtain and be able to employ nuclear devices against US interests. Although such a strategy may initially be unpopular, as long as the seven conditions put forth by Just War theorists are met, such strategy will ultimately be viewed as necessary and justified.

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PREFACE

When one combines the increasing capabilities and intents of state and non-state actors to bring harm to US interests with the willingness of many countries, including close US allies, to sell nuclear material and technology to such actors, the overall likelihood of a nuclear device being used against the US is increasing as time goes by. This threat includes the employment of both nuclear weapons and radioactive dispersal devices.

US policymakers need to formulate and implement a viable strategy in order to counter this threat, and the most effective will be that of Prevention. Prevention is the use of diplomatic and especially military force to foil any attempts of an actor to gain the capability to pose a threat. A new strategy of Prevention, as applied to nuclear counterproliferation, means that the US will act diplomatically and militarily in order to thwart attempts by any country to supply state or non-state actors considered inimical or as who have the potential to pose a future threat to US interests. It differs from Pre-emption in that the US will initiate a diplomatic or military offensive to not allow an actor to gain the capability to conduct a nuclear attack. Pre-emption, on the other hand, would mean that the US would wait for the state or non-state actor to first acquire the capability to conduct a nuclear attack. Only after such an actor has the ability to use nuclear devices would the US then initiate a diplomatic or military offensive.

Since Prevention is a very controversial strategy, owing to the fact that it may require a country to strike before the opposing nation has undertaken any military action, it has historically not been implemented often, chiefly because it would be considered unjust. However, in the age of nuclear proliferation, a closer look at the legitimacy of

Prevention is warranted, since the costs of a nuclear attack are extremely high, if not incalculable. In order to assess such legitimacy, one must compare how Prevention passes or fails the moral and ethical tests laid out by Just War Theory.

This paper lists seven questions (or conditions) that must be answered in order to assess whether or not a military action is justified. Each of those seven questions is extracted from writers and thinkers considered to be authorities on determining whether a war is justified or not. Their works have heavily influenced such international treaties as Article 51 of the UN Charter and the various clauses put forth in the agreements codified in the Geneva Conventions.

Under this construct, if the US carries out preventive strikes against a state or non-state actor who is attempting to acquire nuclear weapons or devices, then such strikes will have to satisfy all seven of the conditions mentioned above in order for those strikes to be considered morally, legally, and ethically justified. Although Prevention has historically been used infrequently because of fears of such action appearing as an illegitimate and unjustified enterprise, implementing Prevention as a strategy to eliminate or decrease nuclear threat against US interests can fully be justified using the same criteria and sources that led to the incorporation of Article 51 in the UN Charter and the Geneva Convention documents.

The 1981 Osirak incident provides a case study of a justified preventive strategy. Faced with the prospect of a nuclear-capable and hostile Iraqi government, Israel launched an airstrike against Iraq's Osirak reactor with the intent of preventing Saddam Hussein from gaining the capability to threaten the Jewish state with nuclear weapons. Although the attack was very successful, there was an international outcry against Israel's

actions. However, there were no long-term ramifications for Israel. Israel suffered little censure in the international community because the Israeli strike fulfilled all seven conditions that determine whether a war is justified.

Since the Osirak incident shows that the strategy of Prevention can be justifiable, the US government should not hesitate to authorize Preventive diplomatic and military action as long as such action satisfactorily meets the seven conditions of Just War. Although it may be unpopular in the world at the time, implementing legitimate Preventive measures will decrease the likelihood of a nuclear attack against US interests and thus fulfill the US government's duty to provide for the security of the American people.

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INTRODUCTION

Terrorism, the act of using illegitimate violence to further political or religious objectives, has often been practiced throughout history.¹ There are no indications that it will ever go away as long as someone has something that someone else wants or professes a different political or religious view than someone else. In fact, not only will state-sponsored or non-state terrorism never disappear, but also technology is increasing the lethality of such acts as time goes on. The advent of nuclear weapons in the 20th century increases this lethality by several orders of magnitude. Since the first nuclear weapon was detonated in Alamogordo, New Mexico on 16 July 1945, the information on how to construct such weapons has slowly leaked out or been discovered by other scientists, usually working for a government. The Soviet Union joined the nuclear club in 1949, and the United Kingdom followed in 1952, France in 1960, China followed in 1964 and India detonated one in 1974.² Today, eleven nations are members or suspected to be members of this “Nuclear Club.” An additional twenty have nuclear technology programs that may or may not be used for peaceful purposes. Many scholars argue that it is only a matter of time before this technology will become available to terrorist organizations that dedicate the manpower, finances, and connections to obtain such a weapon. Obtaining a nuclear weapon is the highest priority of existing terrorist groups such as al-Qaida and those that will come into existence in the future. Thus, the likelihood of a terrorist group obtaining a nuclear weapon or nuclear materials will increase as time goes by. A single nuclear warhead enables the terrorist organization to

bypass many of the layered defenses that any country can put forth, short of placing itself into absolute isolation.

Those circumstances beg the important question, “What is to be done?” The two steps in answering this question are to first identify our political objective and second to choose the best strategy that will achieve it. In the case of dealing with terrorists using nuclear weapons, the political objective is simple; prevent the terrorists from obtaining any nuclear weapons or materials that can be used against the United States or her allies. However, the devil is in the details when it comes to selecting a strategy and managing the implementation of the chosen strategy.

The objectives of this paper are threefold. The first is to illustrate the nature of the nuclear threat from state and non-state actors. The second is to present Prevention as the best strategy for the United States to use against not only terrorist groups themselves, but also against states that have the possibility of enabling such groups to obtain nuclear weapons. Third, this paper will test whether the strategy of Prevention is justified using generally accepted precepts laid out by Just War Theory. Specifically, the paper will use the Israeli decision to attack the Osirak reactor as a case study to determine whether Prevention can be justified.

THE THREAT

Actors Threatening US Interests with Nuclear Weapons

Today, the nuclear threat to US interests emerges from three sources instead of being limited to one adversary, as was the case during the Cold War. The first includes nation-states that have the organic capability to manufacture nuclear weapons and have the intent of using or threatening to use them against US interests. The second is composed of both state and non-state actors that enable members of the third group to realize their goals. The third includes state and non-state groups that do not have the organic capability to make them but retain the ability and intent to deliver them.

During the Cold War, the main threat of nuclear attack came from nation-states possessing the intent and capability of manufacturing and employing nuclear weapons against the United States. Their targets included American and allied population centers, industrial centers, or formations of military units such as troops, ships, command centers, and aircraft. Their means of delivery included installing a nuclear weapon into the warhead of a ballistic missile for strategic attacks, fusing a nuclear device to an artillery shell for tactical attacks, or carrying nuclear devices in some sort of concealed transport such as commercial containers, trains, ships, or trucks with the expectation that the transport would be sacrificed in the ensuing explosion. Even though other nations had the capability to carry out nuclear attacks against the United States as described above, the only ones that might have had the intent to do so during the Cold War included the Soviet Union and possibly China. Today, the only two members of this group include

China and North Korea. Diplomatic relations between Russia and the United States have warmed to the point where Russia no longer threatens to use its nuclear weapons against the United States. North Korea is assessed as having a few nuclear bombs and continues to threaten to use military force to settle the Korean Question. Relations between the United States and China have not yet warmed to the point where one can confidently declare that Chinese nuclear weapons are not a threat to US interests.

The second source includes nation-states that have the organic capability to manufacture nuclear materials or equipment that they intend to sell on the international market. They do not intend to use all of their nuclear materials or equipment for domestic consumption. While nations in this category may or may not have the intent of using the nuclear weapon against American interests, they enable the nuclear option to become available for other nation-states or terrorist groups that fall into the third category. As such, they are called the Enablers in this paper.

The third source includes nation-states and non-state actors that have the intent to use a nuclear weapon against the US but do not have the organic capability to manufacture their own nuclear devices. Therefore, they have to procure nuclear materials from a country or individual that has access to such materials. They retain some ability to deliver the nuclear weapon to an American or allied target.

Evolution of the Nuclear Threat

From 1949 to sometime in the 1970's, the threat originated only from members of the first category. China and the USSR had the ability and potential intent to use nuclear

weapons against American or allied interests, delivered by ballistic missiles launched from ground, surface, or subsurface platforms. By the 1970's, countries that belong to the second group, which include France and the United States, started to sell nuclear equipment to other countries who either were interested in building either a nuclear power plant or harbored ambitions to obtain the ability to build their own nuclear weapons. Concerns over transferring such technologies and even the shipping of nuclear materials to other countries that may not have any peaceful intent led to such protocols being ratified in the United Nations such as the Nuclear Non-Proliferation Treaty (NPT).

3

However, with the rise of international terrorism and 'rogue states' in the 1970's, a third category has emerged. All three depend or would depend on another country to provide any nuclear weapons, nuclear material, or nuclear equipment that enables them to make their own nuclear weapon. Without any support from members in the second category (the Enablers), those state and non-state actors do not pose a credible threat to the US or anyone else as far as nuclear attacks are concerned. Members of this group include al-Qaida and Iran.

It is the addition of the second and third group of actors that leads to the substance of this paper. As the Osirak case study will demonstrate later in this paper, those groups have changed the fundamental equation concerning the use or non-use of nuclear weapons by state and non-state actors. Also, it raises the question as to which strategy is the most effective in countering state and non-state actors who desire to employ nuclear weapons against US interests.⁴

Assessing the Nuclear Threat to United States Interests

The traditional way of assessing the overall threat posed to one actor is to determine the capabilities of another actor combined with its intent. If actor X has the capability and intent to carry out a nuclear attack against the United States, we would say that it poses a threat to US interests. The degree or level of threat posed is proportional to the actor's capability and intent to attack US interests. Thus, the more capability actor X has, the more of a threat actor X is. Also, the more motivated actor X is to attack US interests, the more of a threat actor X is. As time goes by, the capability and intent of state and non-state actors to threaten US interests with nuclear weapons is increasing as illustrated below. On top of all this, failure to prevent a nuclear attack will extract an incalculable and unacceptable cost for the American people.

Escalating Capability due to the Availability of Nuclear Technology

Concern exists today because advances in technology have given state and non-state actors the ability to obtain and deliver nuclear weapons or dirty bombs. In general, members of the third category continue to have a difficult time acquiring nuclear weapons capability. However, as demonstrated by Saddam Hussein in the late 1970's and early 1980's, it is possible for a determined state to acquire the nuclear materials and equipment that could contribute to an indigenous capability to produce nuclear weapons. If this were to happen, then that state would become a member of the first category.

Even without the ability to produce weaponized uranium or plutonium, a country that gets its hands on nuclear material can make a 'dirty bomb' that has the same effects of a nuclear weapon, albeit on a much smaller scale.

There are four types of weapons that can be made from nuclear material or weaponized nuclear material. The first is the classic nuclear warhead mounted on a rocket, air-breathing missile, or underwater torpedo. The second is mounting a nuclear weapon on a non-military platform such as a commercial ship, tractor-trailer, railroad, or other transport device usually not considered to be a weapon. The third is to mount a Radiological Dispersal Device (RDD) on a missile or other military projectile. The fourth is to mount a RDD on a non-military platform, including briefcases.

Placing highly radioactive materials around conventional explosives such as C4 or TNT creates a type of RDD called a 'dirty bomb'. When the conventional material detonates, the resulting overpressure fragments the radioactive material but does not cause it to undergo a fission process (which is the essence of a nuclear detonation). Normally, the fragments can be spread over a distance of a few blocks, but the size of the initial damage is related to the explosive power of the conventional explosive used. Such devices can theoretically be placed in briefcases, trucks, trains, or on tractor-trailers.⁵ The effect of such a weapon is more psychological than physical. Although some will die in the blast effect, widespread fear of contamination is almost certain to lead to the evacuation of the entire city. Such action will have a negative effect on the economy, create food supply problems, and increase the pressure on the infrastructure of other cities in that they need to accommodate the influx of evacuees.

Recent statements by the International Atomic Energy Agency (IAEA) illustrate the escalating capability of state and non-state actors to pursue the last three options. For example, the IAEA has characterized the security of medical and industrial radiation sources as “disturbingly weak in some countries”⁶. The IAEA has also expressed concerns that terrorist groups will be able to create RDDs or ‘dirty bombs’ from radioactive sources used in everyday life such as that which is used in radiotherapy, checking for welding cracks, and the process used to preserve food. Additionally, the IAEA asserts that since 1995, there have been a total of 376 cases of trafficking in nuclear material and other radioactive sources. Eighteen of those cases involved small amounts of highly enriched uranium or plutonium. Although IAEA experts assess those quantities to be insufficient to build a nuclear weapon, Mr. ElBaradei, the Director General of IAEA, said, “Any such materials being in illicit commerce and conceivably accessible to terrorist groups is deeply troubling.”⁷

Escalating Intent – the Rise of Anti-American Entities

International Jihadist movements have risen not only in their size, but their lethality in the past 20 years. Al-Qaida is an example of an international jihadist movement that seeks the destruction of western nations, including the United States. They do not seek any sort of compromised, negotiated settlement. Although they have not yet put forth any details, they have stated they seek to establish a pan-Islamic government in the Middle East that will wage war on the West and eliminate all Western

influences from the Middle East. In short, they have the stated intent of bringing massive casualties to Western nations, irrespective of the cost to themselves.⁸

Al-Qaida is responsible for the attack against the World Trade Centers in 1993 and 2001, the 2000 small craft bombing of the USS Cole, and several US Embassy bombings in Africa. There is no indication yet that al-Qaida has been subdued, although there are no doubts that their operations have been disrupted by aggressive counterterrorism campaigns waged by the United States and many other nations. According to the Council on Foreign Relations, “In the mid-1990s, al-Qaida agents tried repeatedly—without success—to purchase highly enriched uranium in Africa, Europe, and Russia.”⁹

Jihadist movements aren’t alone in seeking weapons of mass destruction, including nuclear weapons. Some cult or apocalyptical groups likely have an interest in obtaining such capability. For example, the Aum Shinrikyo cult (now called Aleph) used Sarin gas in two separate attacks in Japan and remains the only terrorist/cultist group to have successfully employed a WMD attack so far.¹⁰ At this time, there are no known cult groups that pose the same level of threat against US interests when compared to international jihadist movements. However, this could change at any time.

Rogue states such as Iran and North Korea also present a threat to US interests. Both have the theoretical capability to mate a nuclear device (either weaponized or ‘dirty’) to a delivery vehicle such as a missile or truck and use it. The hostility and unpredictability that are inherent to those regimes makes it difficult to declare that they will not make the decision to launch a nuclear attack against US interests. North Korea re-started its Yongbyon nuclear reactor and thus far has refused to shut it down or even

let United Nations International Atomic Energy Agency (IAEA) inspectors visit.¹¹ Iran declared that it was pursuing the goal of joining the nuclear club for ‘peaceful purposes’ but continues to prevent full transparency of their nuclear program.¹²

Less Restraint – The Non-Applicability of MAD

The biggest difference between the Cold War and post-Cold War era with respect to nuclear weapons is that Mutually Assured Destruction (MAD) can no longer be applied. In the Cold War, the ‘balance of terror’ between superpowers led to the concept of ‘arms for peace’, meaning that MAD was in effect and actually served to prevent the first use of a nuclear weapon by either NATO or Warsaw Pact members. MAD theory stipulated that if one country were to launch a nuclear attack on the other in a first strike, then the receiving country could launch its missiles in a second strike (before, during, and/or after the first strike hits) and thus ensure the destruction of the aggressor. This, of course, only works if both governments seek to preserve their own populations and remain unwilling to pay such a high price for the annihilation of the other. It is unclear whether MAD can be applied to rogue states today, and it is clear that it cannot be applied to international terrorist organizations. Professor Yuval Ne’eman, who was a member of the Atomic Energy Commission in 1981 said, they “talk in terms of *shaheeds* (martyrs).”¹³ If the state or non-state actor is willing to sacrifice itself in order to bring death and destruction to US interests, then MAD does not apply. Therefore, there are no theoretical countermeasures to prevent today’s state or especially non-state actor from detonating a nuclear weapon against a US interest.

Cost of a Nuclear Attack

A 1990 government publication stated that approximately 72 percent of the US population is potentially affected by nuclear blast overpressures of .5 psi or more.¹⁴ The same study stated that, based on calculations incorporating wind patterns, roentgen exposure effects can affect the entire US population.¹⁵ This study was formulated specifically with an attack by the Soviet Union in mind, but it does illustrate how vulnerable the population of the United States is to a nuclear attack. Europe, with its higher average population density, is even more vulnerable.

The combination of an increase in capabilities and intents of various actors in the world to conduct a nuclear attack against US interests is a clear indication as to why the US policy makers and military leaders should place a very high priority on formulating strategies and implementing actions that will prevent such an attack from taking place. The potential cost in terms of lives, resources, and property loss of even one nuclear detonation inside the US is, for all practical purposes, incalculable. We simply do not have sufficient empirical evidence upon which to formulate precise assessments as to the aggregate impact of the loss of one city to blast and fallout effects. There are only four historical examples of a city being exposed to lethal levels of radiation. The nuclear bombardments of Hiroshima and Nagasaki as well as the Chernobyl event in Russia and the Goiânia contamination incident in Brazil are the only four examples that provide some glimpse of what can happen in the short and long run.¹⁶ What is clear is that the costs are unacceptable to the American people.

PREVENTION AND JUST WAR THEORY

In analyzing whether Prevention is a valid strategy for the United States to follow with respect to the counterproliferation of nuclear weapons and materials among states and non-state actors inimical to the United States, this paper will define and discuss the doctrine of Prevention. Israel's 1981 attack against the Osirak reactor is a clear example of a nation using a strategy of Prevention. As such, the Osirak incident will be presented as a case study and this paper will analyze Israel's decision-making. Finally, this paper will present some lessons learned from the Osirak incident that are relevant to the use of Prevention as a strategy.

Prevention

The strategy of Prevention is often used interchangeably with the strategy of Pre-emption. In this paper, however, the two words have different meanings and implications. The strategy of Prevention uses the four elements of national power, Diplomacy, Information, Military, and Economics, to preclude an actor (state or non-state) from obtaining the capability to threaten a country. Pre-emption is similar to Prevention in that it is viewed generally as a military endeavor that delivers a *first strike*; however, it includes the use of all national elements of power to destroy a nation's capability to threaten a country. The key difference is that in a successful Prevention strategy, the hostile nation never attains the capability to threaten another country. On the other hand, in Pre-emption, the hostile nation already possesses the capability to

threaten another country and the object is to eliminate that capability. Is it lawful or justified to prevent a state or non-state actor from obtaining the capability to threaten the United States? For this paper, some general precepts of Just War Theory will be used to suggest whether Prevention is an acceptable strategy.

Just War Theory

There are scholars throughout history who have attempted to formulate dictums that differentiated between wars that were morally or ethically justifiable and those that were not. Such scholars have both religious and secular backgrounds. This paper cannot cover Just War Theory in its entirety, but a synopsis of the various dictums can be presented. Cicero wrote, “The use of force was justifiable only when the war was declared by an appropriate governmental authority acting within specific limits.”¹⁷ St. Augustine declared that the only justifiable reason to go to war is the desire to bring about peace. He criticized other motives for war such as, “[T]he desire for harming, the cruelty of revenge, the restless and implacable mind, the savageness of revolting, the lust for dominating, and similar things.”¹⁸ Thomas Aquinas stated three requirements that had to be met. First, the war was to be conducted by a lawful authority that had the power to wage war. Second, there needed to be a justifiable reason to go to war. Third, the war had to be undertaken for the right intentions such as, “The advancement of good, or the avoidance of evil.”¹⁹ Hugo Grotius (1583-1645) wrote, “It is lawful to kill him who is preparing to kill.”²⁰ He also required three conditions to be met. First, the danger must be immediate. Secondly, force was the last resort to defend the nation’s interests.

Thirdly, the force used was within proportion to the amount needed to defend the nation's interests.²¹

Various attempts have been made to codify these ethical and moral premises. The most prominent legal item used today is Article 51 of the United Nations Charter. It says that, "Nothing in the present Charter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security."²²

Justified Acts of Prevention

Depending on how it is used, the strategy of Prevention may 'pass the test' that is laid out by Cicero, Augustine, Aquinas, Grotius, and Article 51. Dr. Louis Rene Beres, Professor of Political Science and International Law at Purdue University, provided the most relevant statement when he wrote, "Under the long-standing customary right known as anticipatory self-defense, every state is entitled to strike first when the danger posed is, instant, overwhelming, leaving no choice of means and no moment for deliberation."²³ In order to gain and maintain credibility as a justified war or a justified Prevention attack, each situation has to meet the following criteria.²⁴

1. A just war can only be waged as a last resort. All non-violent options must be exhausted before the use of force can be justified.
2. A war is just only if it is waged by a legitimate authority. Even just causes cannot be served by actions taken by individuals or groups who do not constitute an

- authority sanctioned by whatever the society and outsiders to the society deem legitimate.
3. A just war can only be fought to redress a wrong suffered. For example, self-defense against an armed attack is always considered to be a just cause (although the justice of the cause is not sufficient--see point #4). Further, a just war can only be fought with "right" intentions: the only permissible objective of a just war is to redress the injury.
 4. A war can only be just if it is fought with a reasonable chance of success. Deaths and injury incurred in a hopeless cause are not morally justifiable.
 5. The ultimate goal of a just war is to re-establish peace. More specifically, the peace established after the war must be preferable to the peace that would have prevailed if the war had not been fought.
 6. The violence used in the war must be proportional to the injury suffered. States are prohibited from using force not necessary to attain the limited objective of addressing the injury suffered.
 7. The weapons used in war must discriminate between combatants and non-combatants. The deaths of civilians are justified only if they are unavoidable victims of a deliberate attack on a military target.

The above seven conditions are extrapolated from the works of thinkers such as Cicero, Augustine, Aquinas, Grotius, who are regarded as leading contributors to the Just War Theory. Their writings have influenced such international accords as the Geneva Conventions and Article 51 of the United Nations Charter. As such, those seven points will form the litmus test as to whether a particular strategy is ethically and morally

justified. There certainly are more items that could be added based on other sources, however, the above seven constitute the core arguments that classical Just War Theorists often put forth.

In the next section, a case study of a Prevention as a strategy will be examined to suggest whether Prevention can be justified or not.

A Case Study of Justified Prevention- The Osirak Incident

The events and issues that led up to the bombing by Israel of Iraq's Osirak nuclear reactor provide a starting point in analyzing the feasibility and justifiability of Prevention as a strategy for furthering the interests of a state. The tactical aspects of the operation will not be discussed in depth in this paper, as the intent here is to look at various issues and aspects of the decision that led to the operation itself. There are, however, some tactical aspects of the operation that influenced the decision that need to be highlighted.

On 7 June 1981, a flight of eight F-15s and six F-16s took off from Etzion Airbase in southern Israel. They overflew Jordanian airspace and successfully attacked the Iraqi Osirak nuclear reactor over 600 miles from Israeli airspace. All aircraft and crew returned safely to Israel from the mission. The reactor was completely destroyed and Iraq's nuclear program would never fully recover.²⁵ These events raise at least three questions. Why did Iraq seek to acquire a nuclear reactor? How were they able to do so? Why did Israel attack the nuclear reactor?

Iraqi Ambitions

The argument that Iraq was seeking a nuclear reactor simply in order to manufacture weapons-grade nuclear material is a compelling one. Ten years before the Nuclear Non-Proliferation Treaty (NPT) went into effect, the Iraqi nuclear program began when Iraq and the Soviet Union made a deal in July 1960. The Russians would build a nuclear research reactor outside Baghdad. Construction on the plant began in 1963 and it went on line in 1968. The Soviets also trained about 100 Iraqis in nuclear physics and plant operations. The type of nuclear fuel used for this plant was 10 percent enriched uranium. However, when it came time for the reactor to be refueled in 1978, the Iraqis managed to convince the Soviets to provide more powerful fuel in the form of 80 percent enriched uranium, which boosted power output from two megawatts to five megawatts. Still, the Iraqis wanted the Soviets to provide fuel that had a higher percentage of uranium. However, the Soviet Union refused as it knew that anything over 90% enriched uranium would enable the Iraqis to obtain weapons-grade nuclear material from the processes.²⁶ Disappointed, the Iraqis turned to the Japanese to see if they'd be interested in building a larger nuclear facility. However, the Japanese government vetoed any nuclear cooperation.²⁷ Iraq went to France next.

In November 1975, the Chirac government of France agreed with Saddam Hussein to provide Iraq with a 70-megawatt reactor, sell them six 26 lb. charges of uranium, each enriched to 93 percent, and help the Iraqis establish a nuclear research and training center. Even though Andre Giraud, the head of the French Nuclear Energy Committee protested, the Osirak reactor would be built in al-Tuwaitha, twelve miles

southeast of Baghdad. The total cost to France would be \$260 million and it would be completed in 1981.²⁸

Iraq, in turn, agreed to guarantee 70 million barrels of oil annually and buy French arms, including Mirage fighters, tanks, helicopters, missies, integrated air defense systems (IADS), surface to air missiles (SAMs), radars, and electronic early warning systems, totaling approximately \$2.1 billion dollars. The deal also included field inspections by international inspectors at the times of Iraq's choosing since Iraq was a signatory of the Non-Proliferation Treaty (NPT).²⁹

Italy, and to a lesser extent, Brazil also had complicity in Iraq's mission to obtain nuclear materials and nuclear technology. In January 1976, Italy signed an agreement with Iraq to provide nuclear reactor equipment and technical assistance directly related to reprocessing radiated nuclear fuel. Such a process includes plutonium separation that leads to obtaining weapons-grade nuclear material. In February 1978, several Italian firms entered into contract with the Iraqi government to build a limited plutonium separation plant. While this plant would not be immediately able to manufacture weapons-grade plutonium, the Iraqis would not have to make many changes to the 'shell' provided by the Italians in order to achieve such a result. Also, Iraq bought from Italy a total of 12 tons of uranium and sent 150 Iraqi technicians and engineers to Italy for training. Brazil's involvement with the Iraqi nuclear program was limited compared to Italy's. In January 1980, Brazil agreed to supply Iraq with a uranium ore and low-grade uranium. To highlight Iraq's thirst for nuclear materials, Iraq also bought uranium from Portugal (120 tons) and Niger (200 tons).³⁰

Why were the Iraqis obtaining a nuclear research reactor? One possibility is that they sought to obtain the ability to build a legitimate nuclear power plant that would supply electricity to Iraq's industrial and population centers. At face value, this appears to be a valid rationale; however, there are two flaws with this notion. First, Iraq's industrial, commercial, and residential electrical demands were not high enough to warrant a nuclear power plant. Their electrical delivery infrastructure was the item that needed work, not their electrical production. Second, oil is abundant in Iraq and it would be much cheaper for Saddam to build electrical generation plants that used petroleum instead of nuclear plants that require uranium. From a business perspective, it did not make any sense. The only conclusions seem to be that Iraq either desired access to nuclear technology for military purposes or for some reason expected its electrical demand to grow exponentially in the next decade and somehow they would not be able to use oil for the production of electricity. The latter is much less credible than the former since there were not any independent publications at that time that discussed any predictions of shortcomings in Iraqi oil production capability.

Israel's Concerns

Immediately after the Jewish state was founded in 1948, several Muslim countries attacked the Israelis in an attempt to eradicate them from the Middle East. The Israelis were not defeated and one by one each nation signed a peace treaty with Israel. However, by 1981, Iraq still had not signed any sort of peace settlement. Therefore, technically Iraq and Israel were in a state of war. If Iraq were to use that nuclear reactor

to obtain weapons grade nuclear materials, they would become the very first Arab nation to possess an atomic weapon. In the Israeli view, “The Osirak reactor was a technologically advanced version of the Final Solution.”³¹

In other words, if Iraq were to obtain nuclear weapons, Saddam would have the option to use it against the Israeli state. The question then became, “Would Saddam use the bomb against Israel?” Arguments have been made on both sides of this question. However, it remains an unanswerable question, since it is possible that Saddam could opt not to use it for several years and then, one morning, suddenly change his mind. One thing is clear. Saddam sought to inscribe his name in history as a glorious leader of the Arab people, and he would certainly attain that status if he were directly responsible for the eradication of the Israeli state.³² It is not hard to find public statements made by Saddam Hussein threatening to use nuclear weapons on Israel. For example, on August 19, 1980, Hussein made the following broadcast.

In connection with the Zionist entity’s campaign against the Iraqi use of nuclear technology: the rich and glorious past of Iraq will only be appreciated when such technology is harnessed to the cause of the Arab nations. Iraq will use it for the freeing of Palestine and no other purpose.³³

With the perspective of historical distance, we can conclude that Saddam quite possibly would have used the nuclear weapon against Israel. During OPERATION DESERT STORM, Saddam launched multiple SCUD missiles armed with conventional warheads that landed in Israel, even though Israel was not part of the Coalition force that sought to evict him from Kuwait. Even though the world did not have this luxury of

hindsight, Iraq's aggression against Israel from 1948 onwards was sufficient to justify the concerns of Israel that Iraq would create a mushroom cloud over Tel Aviv.

Comparing Israeli Decisions/Actions to Just War Principles

Did the attack against the Osirak reactor by Israel fulfill all or any of the principles set forth by the Just War Theory discussed above? This section will compare the decisions, logic, and actions of the Israeli government with the seven Principles of Just War listed above which were extracted from classical Just War theorists.

Was this attack a last resort?

Were there any other non-violent options available before Israel turned to force? According to an official Israeli government publication, "The decision was taken after six years of intensive diplomatic efforts, which proved futile, aimed at defusing the Iraqi nuclear program."³⁴ The diplomatic (and later military) effort was triggered because, "[Iraq's] choice of an Osiris-type reactor, coupled with an insistence on weapons-grade uranium and the acquisition of ancillary installations capable of sustaining a complete fuel cycle, left little doubt as to the military nature of the Iraqi nuclear program."³⁵ Thus Tel Aviv made the following declaration:

These steps clearly constituted a deliberate attempt to exploit limitations in the International Atomic Energy Agency (IAEA)

safeguards on Materials Testing Reactors (MTRs) – of which Osiris [Osirak] is among the largest in the world – to embark on a program of nuclear weapons development, without risking detection, within the framework of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), of which Iraq is a signatory.³⁶

Tel Aviv also recognized that, “Once ready, at any moment of its choice, [Iraq] could have exercised its right to withdraw from the NPT framework on three months notice.”³⁷

Israel put diplomatic pressure on the United States, France, and Italy to refuse shipment to Iraq of nuclear reactor equipment and especially any highly enriched uranium materials that could be converted into weapons grade uranium. However, American and Israeli pressure on France and Italy did not prevent the shipment.

Prior to the Osirak incident, Israel proposed the establishment of a nuclear weapon-free zone along the lines of the Tlatelolco Treaty of 1967 that applies to Latin America nations. However, this proposal was never taken seriously by any Middle East nation and it was abandoned.

It is clear that Israel aggressively pursued the diplomatic approach for settling the issue prior to turning to the military option. Israel voiced its objections to the international community and tried to block the shipment of the nuclear materials to Iraq. As a last resort, Israel undertook the strike against the Osirak reactor at the time it did only because Iraq was about to load the nuclear materials into the reactor. Striking a ‘hot’ reactor would have led to widespread contamination and possibly attracted a massive international backlash.

Was the war waged by a legitimate authority?

Is the government of Israel a legitimate authority that has the inherent right to make the decision to wage a war? In the eyes of some Arab nations, the answer is that Israel has no inherent right to exist. However, in the eyes of the inhabitants of Israel, there is overwhelming consensus that the democratic government established in 1948 is legitimate. The fact that Israel is a democratic government that is controlled by representatives of the people itself validates the legitimacy of the Israeli government as far as Israeli citizens are concerned. The Israeli government has a permanent seat at the United Nations General Assembly. Since the United Nations is composed of official representatives from the international community of nations, it is then logical to state that the international community recognizes the government of Israel as legitimate. Therefore, irrespective of the minority Arab opinion, the government of Israel in 1981 passes Cicero's and Aquinas' 'legitimate authority' test.

Was the attack conducted to redress a wrong suffered?

This is the most complicated question to answer. First, the definition of 'wrong suffered' is not clear. There seem to be two types of 'wrong' that a nation can 'suffer'. The first category includes any physical actions that a nation or nations undertakes to directly attack another without any provocation. An

example of this would be Iraq's invasion of Kuwait in the 1990s. In this sense, Kuwait had a right to defend itself.

The second category includes any actions that a nation undertakes that indirectly allows or enables another nation to conduct military aggression against a third nation. This includes any arms shipments or transfer of nuclear capabilities to a nation that has the intent of conducting an armed attack using the new equipment or materials. Below, the two groups are divided into Direct Wrong and Indirect Wrong categories to analyze the different 'wrongs suffered' by Israel.

Direct Wrong

Article 51 of the United Nations charter declares that every nation has the right to defend itself against armed attack. However, the wording of the clause does not clearly delineate the scope of the right to self-defense. For example, is the use of force for prevention or preemption legitimate? A literal interpretation of the article implies that a state only has the right to wage defensive operations as opposed to offensive operations. As such, another state must become the aggressor first before the state in question can legitimately defend itself. Therefore, the implication is that a state has the right to react to an offensive operation waged by another state.³⁸

Following this literal interpretation, Israel's action against the Iraqi Osirak reactor was clearly not justified as Israel had not yet suffered any physical attack

by Iraq using capabilities derived from the Osirak reactor. This would be an open and shut case, except the threat posed by nuclear weapons or any other weapon of mass destruction is not actually discussed elsewhere in the UN Charter. A country may not be able to react to a nuclear attack by an aggressor, especially nations that are small in size and therefore will suffer an extremely high level of casualties to the point that it will no longer exist as a nation and therefore be unable to invoke Article 51. In Israel's case, the first nuclear war that it loses will be its last. Once nuclear weapons have detonated on Israeli soil, the blast and fallout effects will effectively cause Israel to lose the war before they are able to react. Therefore, where nuclear weapons are concerned, the literal interpretation of Article 51 cannot logically remain in effect. Article 51 then becomes a vague and indefinable legal clause that can be used to argue one way or the other.

Indirect Wrong

Outside Article 51, another argument is that Israel's actions were justified because it suffered a wrong not only at the hands of the Iraqis, but also at the hands of the French, Italians, and possibly the Brazilians. In a nutshell, it can be argued that the actions of the Iraqi, French, and Italian governments put Israel under a new nuclear threat and threatened to fundamentally diminish Israel's ability to defend itself from Iraqi aggression. Since there never has been a peaceful settlement between Israel and Iraq, it can be argued that French and Italian actions were enabling Iraq, a nation technically in a state of armed

hostilities with Israel, to obtain the ultimate capability to resolve the war on terms favorable to Iraqi political objectives. Therefore, French and Italian actions prior to the Osirak attack could be constituted as a 'wrong suffered' by Israel.

One counterargument to this point does exist. France, Italy, and Iraq argued that the sales of nuclear materials and equipment to Iraq were for peaceful purposes. They pointed out that there are safeguards established by the International Atomic Energy Agency (IAEA) under the legal authority of the Nuclear Non-Proliferation Treaty (NPT) and that Iraq is a signatory of the NPT.

There are, however, several 'holes' in this counterargument. While it is technically legal on paper via the NPT for France and Italy to supply Iraq with a nuclear research reactor and the requisite materials, this action qualified as an 'indirect wrong' against Israel. The foremost reason for this qualification is due to the inherent weaknesses of the Non-Proliferation treaty.

First of all, any country has the right to withdraw from the NPT treaty if they give three months notice.³⁹ This is in effect even if the country already has a full-fledged nuclear program established. There are no obligations for any member of the 'Nuclear Club' to stay within the treaty. In fact, North Korea withdrew from the NPT in 2003 and therefore IAEA safeguards no longer are implemented at the Yongbyon nuclear reactor.⁴⁰ Once it withdraws from the NPT, any country may choose to weaponize the fissile material, if it has not already. There are no further negative ramifications that such a state would face as far as international law is concerned since the NPT contains no automatic punitive clauses.⁴¹

Second, the IAEA inspection teams operate under a restrictive protocol that hampers their ability to detect the diversion of highly enriched uranium for military purposes. This issue was brought up and researched by US Senator Alan Cranston (D – CA) when he made the following congressional testimony:

I have received four revealing internal documents from American sources within the IAEA. Those documents contain an estimate that Iraq could have produced enough plutonium each year in the Osirak reactor for up to three nuclear bombs. Furthermore, these IAEA documents indicate that there is a significant possibility – indeed, probability – that this plutonium production would not have been detected by the IAEA inspectors. Under the terms of Iraq’s current agreement with the IAEA, inspections could be limited to three a year. Thus, Iraq could load its reactor between inspections but unload it before each pre-announced inspection. Under this procedure, Iraq could produce plutonium from unsafeguarded uranium yellowcake sufficient for one bomb every 4 months, without IAEA detection.⁴²

Sen. Cranston’s comments were supported by nine senior IAEA technical specialists who concluded that, “diversion paths are technically practicable,” and that it was, “very unlikely that some IAEA member States like Iraq would accept the inspection activities necessary to detect such a diversion.”⁴³ Cranston continued by making the following statement:

I have also learned from an IAEA inspector in the section responsible for Iraq that several of the most sensitive Iraqi nuclear facilities were in fact under no international safeguards whatever. Not subject for inspection were the potentially sensitive hot cells supplied by Italy for fuel fabrication and plutonium reprocessing. Not subject to inspection was the stockpiled raw uranium yellowcake, which could be used for plutonium production. The documents I have obtained establish that the inspectors of the Iraqi program were not authorized to search for any clandestine bomb making facilities.⁴⁴

Cranston went on to state that he had received information that since 1976, only Soviet and Hungarian inspectors have visited Iraq since Iraq objected to any Americans being part of the inspection team. On top of all this, the last inspection before the Israeli strike of the Osirak reactor declared Iraq to be in compliance with IAEA safeguards.⁴⁵ However, the inspection was conducted by flashlight as the Iraqis turned off all the lights in the facility.⁴⁶

Third, there are no automatic punitive clauses in the NPT that hand down penalties to a nation found in violation of the NPT. Instead, once a breach of the NPT treaty is detected (if it ever is detected), the matter is simply referred to the UN Security Council. This is an ineffective clause because it does not arm the UN Security Council with any further powers beyond what it already has. As such, there is no additional risk of penalties being levied against the state found in violation of the NPT compared to a state that never signed the NPT.

The absence of transparency in Iraq's nuclear program combined with the inefficiency of the NPT and the lack of a peace treaty between Israel and Iraq demonstrates that Israel clearly was suffering from an indirect wrong. As such, it is clear that the Israeli government conducted the attack in order to redress a wrong suffered.

Was it waged with a reasonable chance of success?

Every military option entails risks. Based on the expert knowledge of the Israeli Air Force planners and pilots, they informed Prime Minister Begin that the operation could be carried out, but the risk lay with any aircraft running out of fuel. No in-flight refueling would be attempted because the risk to the aerial tankers and their

crews was too great since Israel's tanker aircraft fly slow enough to be exposed to enemy SAMs, AAA, and/or fighter aircraft.⁴⁷

The major concern of the Israeli decision-makers, however, was not the lives of their pilots, it was the lives of the Iraqi and foreign civilians not part of the Iraqi armed forces. A 'reasonable chance of success' does not include the needless deaths of Iraqis and foreigners living in the area that would be affected by a possible blast and the certain ensuring radioactive fallout if the Israelis were to attack a 'hot' reactor. In order to prevent unwarranted casualties, Tel Aviv decided that any attack on the Osirak reactor would have to take place before the radioactive material was loaded into the reactor.

This concern came not primarily out of any humanitarian reasons, but from concern about reactions from the world community. If Israel were directly responsible for a high level of civilian casualties, then Israel could be accused of committing an atrocity. Therefore, they ran the risk of sanction from the international community, including the US possibly withdrawing the recognition of Israel as a nation. World opinion could then shift and support the Arabs who might find a renewed vigor in eliminating the Jewish state.

Was the goal to re-establish peace? Was the peace preferable to a peace if the war had not been fought?

At the time the decision was made to attack Osirak, the Israeli government refused to allow any peaceful solution that resulted in any Arab nation possessing a nuclear weapon. Such a capability, mated with an uncompromising intent to destroy the Jewish state, meant that the Israelis would then have to live under the constant threat of annihilation. Without any effective political or military defenses against nuclear weapon delivery systems, Israel would likely cease to exist. Therefore, the goal was not to compel the Iraqis to sue for peace, but to simply maintain their own existence. In the view of Tel Aviv and most of the rest of the world, a peace that has Israel and Iraq at a constant state of war is much better than a peace where Israel is extinct.

Was the violence used proportional to the injury suffered?

The Osirak operation was a “surgical” operation that targeted only the reactor. As a result, casualties were limited to Iraqis and one French scientist working in and around the reactor. This low level of casualties illustrates that Israel sought to limit the level of violence during their raid. Israel could have waged a general offensive against the Iraqi military and possibly attacked Iraqi cities in the same manner that Iran did. However, Israel chose to hit only the reactor and strike it before the radioactive material was installed. The timing and

the scope of the Israeli strike against the Osirak reactor shows that Israel used a level of violence that was much lower than the potential injury that Israel might have suffered. As such, Israeli actions in the Osirak incident pass the proportional level of violence test.

Did the weapons used in war discriminate between combatants and non-combatants?

As discussed above, the bombs dropped by Israeli warplanes were intended for the Osirak reactor. No intentional targeting of civilians outside the reactor was conducted. Therefore, it is safe to say the intent of the Israeli attacks was to hit a purely military target. Since the civilian scientists inside the reactor were part of ensuring the operation of that reactor, which would have provided the Iraqi armed forces with the capability to conduct a nuclear attack against Israel, they became legitimate combatant targets. Therefore, the plan implemented by the Israeli Air Force shows that the Israeli government successfully discriminated between combatants and non-combatants.

Israel conducted the strike against the Osirak reactor for one reason only, to prevent a *fait accompli* from taking place. In the view of the Begin government, once the Osirak reactor went on line, it would no longer be a legitimate military target, yet it would remain a major contributor to Iraq's ability to use nuclear weapons against Israel. Israel chose to implement a strategy of Prevention rather than waiting for Saddam Hussein to obtain the ability to use nuclear weapons against his neighbors. In the short

run, the world, including the United States, criticized the Israeli air strike. The UN passed a resolution condemning Israel's actions and the United States suspended the shipment of F-16 fighter jets that Israel had bought. However, in the long term, there were no serious political ramifications that Israel had to suffer. Eventually, the American administration allowed the F-16s to be shipped.⁴⁸ In fact, due to Coalition operations during the Gulf War, many nations, including the United States and even Saudi Arabia, were most likely secretly thankful that Israel eliminated any nuclear threats that Coalition forces would have otherwise had to face in OPERATION DESERT SHIELD / STORM.⁴⁹

LESSONS / IMPLICATIONS FOR THE UNITED STATES

The Osirak case presents some lessons to be learned by the United States about using a strategy of Prevention in its Global War on Terrorism where nuclear proliferation is concerned.

First, the international system remains a self-help system. As far as counter-proliferation is concerned, the UN has weak institutions that neither have the legal clout nor the enforcement authority to compel states and non-state actors from pursuing the nuclear option. In fact, the NPT itself has a clause that allows the signatory to opt out of it without sacrificing the nuclear materials or related equipment that it already obtained by signing the NPT. There are no automatic punitive provisions in any UN resolution, international Treaty, or any other legal document that concerns halting the spread of nuclear technology to unstable nations.

Second, Prevention operations will not be popular with the world. However, as Dr. Alexander Bligh, Chairman of the Departments of Political Science and Middle Eastern Studies at the College of Judea and Samaria, stated, “The raid proved that Israel must not give excessive weight to considerations of world public opinion where its very existence is concerned.”⁵⁰ The same applies to the United States government.

Third, the biggest problem for the United States with respect to nuclear proliferation may not be our enemies, but rather our friends. In the Osirak incident, it was the Soviet Union, an avowed enemy of the United States, which refused to provide Iraq with the 93% enriched uranium that Iraq wanted. On the other hand, traditional US allies, France and Italy, were willing to sell Iraq nuclear materials and equipment, thus increasing Iraq’s chance of obtaining nuclear weapons-grade material. They did this not just because of the allure of access to cheap oil but also because of the massive amount of arms that Iraq agreed to purchase from France and Italy. It can be said that, with respect to the Osirak issue, France and Italy put commercial interests above global security interests.

Fourth, although the Israelis may have never called it Containment, they practiced a form of that strategy against Iraq for a while. They used their diplomatic, economic, and possibly military elements of national power to contain any expansion in Iraq’s political, diplomatic, or military power with respect to obtaining nuclear technology. Unfortunately, this Containment strategy failed and Israel had to change their strategy to that of Prevention using the military element of national power. Therefore, although Containment worked against the Soviet Union and brought about its fall, such a strategy may not always work, especially against regimes that are willing to pay a high price to

achieve their political objectives. Nor does Containment work against terrorist groups such as al-Qaida as they are non-state actors and can shift their base of operations from one country to another.

Fifth, a strategy of Prevention can be justified using some general principles of Just War Theory. As long as the United States can make a solid argument that all military actions taken against state and non-state actors involved in obtaining nuclear weapons or the capability to manufacture nuclear weapons fall within the parameters of the Just War Principles mentioned earlier, America will retain the moral and ethical high ground as far as world opinion is concerned. This holds true even if the specific action is unpopular and provocative.

Recommendations

No one doubts that the nuclear game is one where the stakes are the highest that have ever existed in history. The nuclear threat posed by state and non-state actors is increasing as time goes by due to the sum of increasing capabilities and increasing intent to attack US interests. The cost of ignoring or wishing away this threat is simply incalculable and unacceptable to the people of the United States. Therefore, it is the duty of the United States government to implement a strategy that will effectively counter the ability of hostile state and non-state actors to obtain nuclear weapons that can be used against US interests.

Based on a justified Prevention strategy, it is the recommendation of this author that the United States government, especially the Department of Defense, look into ways to translate this strategy into the operational and tactical levels of warfighting.

First, operational-level commanders need the ability to move fast and strike targets that are enabling hostile or unstable state and non-state actors from obtaining nuclear materials. This is especially self-evident when it comes to preventing terrorist groups from obtaining the capability to deploy a dirty bomb or even a nuclear weapon able to start a fission reaction. Most assume that US Special Operations Command (USSOCOM) will be the executive agent for implementing such actions due to their ability to quickly deploy and deliver kinetic strikes against small targets. Whether or not USSOCOM has this ability is beyond the scope of this paper, but suffice it to say that if USSOCOM does not have this ability, they need to obtain it. If USSOCOM already has this ability, they must maintain it.

Second, higher levels of investments need to be made in the US intelligence collection and analysis capability to detect and track nuclear materials and equipment. As the footprint of such materials will inevitably become smaller with the advent of technology, detection will become increasingly difficult. Decision-makers in the executive and legislative branches should never expect that they will have 100 percent of the information that pertains to any specific proliferation program. Therefore, they will have to be willing to authorize diplomatic, economic, informational, and/or military actions without ever having the full picture.

Third, the United States needs to be willing to engage and even challenge its allies with all elements of national power in order to prevent those nations from spreading

nuclear technology. As the Osirak incident reveals, even traditional allies like France and Italy have the capability to pose an indirect threat to US interests. Those countries were unable to say “No” to lucrative defense sales to Saddam Hussein’s Iraq even at the expense of providing an unstable state actor with the ultimate weapon. In other words, the US must be willing to prevent its allies from putting their commercial interests over US and global security interests.

The three recommendations illustrated above are just the tip of the iceberg. There are many management changes and technological solutions that can be initiated in the US bureaucracy such as enlarging America’s human intelligence (HUMINT) collection and analysis capability or changing official US foreign policy to challenge the international dependence on the provisions of the NPT to ensure nuclear weapons and dirty bombs are unable to fall in the hands of hostile states or anti-American terrorists.

What remains clear is that the capabilities and intent of hostile parties to conduct an attack against the United States using a nuclear weapon or a dirty bomb is increasing with the passage of time. In order to effectively counter this threat, the United States may have to rely on a strategy that is designed to explicitly prevent, not merely contain or deter, hostile actors from obtaining and employing such technology.

CONCLUSION

The first objective of this paper was to illustrate how it is becoming more likely that the United States will face state or non-state actors that threaten to use nuclear weapons against US interests. The proliferation of nuclear technology, scientific know-

how, equipment, and materials increasingly allows a determined organization to obtain the capability to build a nuclear weapon or a dirty bomb. The fact that some nations place their own commercial interests over global security issues, as France and Italy did in the construction of the Osirak reactor, illustrates that there are Enablers out there who will supply interested groups with the means to create a nuclear weapon. The over-reliance on the ability of the United Nations International Atomic Energy Agency to detect illicit nuclear proliferation, coupled with an unhealthy dose of faith in the strength of the NPT has led many countries into complacency as far as counterproliferation is concerned. Therefore, it is evident that the threat of a nuclear attack against the United States is increasing.

The second objective of this paper was to present and define Prevention as a valid strategy for the United States to pursue. Prevention has historically not been invoked often, but in the nuclear age, the cost is prohibitive of not implementing diplomatic, economic, information, and especially military programs to prevent nuclear technology from transferring from an Enabler to a state or non-state actor.

The third objective was to illustrate general principles of Just War Theory as written by various secular and religious figures and test whether Prevention can be justified by those principles. It is not common in recent history to see a country implement Prevention as a strategy to eliminate the possibility of a future nuclear threat. However, this paper shows that Israel's Prevention strategy, which cumulated in the Israeli attack against the Osirak reactor passes the test or challenge laid out by principles expressed by Just War Theory. Therefore, Prevention should not be dismissed as being excessively provocative or simply unjustified.

As the threat of a nuclear attack against US interests increases, Prevention increasingly becomes the best strategy for the US government to use in order to preclude a nuclear attack. Based on the Osirak incident, Prevention will be an unpopular strategy in the eyes of the world; however, the United States will gain much more than it loses. As a result of an aggressive Prevention strategy, countries may propose resolutions in the UN General Assembly condemning US actions. However, the US government will have fulfilled its sacred duty to provide for the common defense of its people.

BIBLIOGRAPHY

Ackerman, David M. International Law and the Preemptive Use of Force Against Iraq. Washington, DC: Library of Congress, 2002.

Aquinas, Thomas. The Summa Theologicae. Part II, Question 40. Benzinger Brothers Edition, 1947. Trans. by Fathers of the English Dominican Province. 09 Mar. 2005. <<http://ethics.acusd.edu/Books/Texts/Aquinas/JustWar.html>>

Bederman, David J. "Reception of the Classical Tradition in International Law: Grotius' De Jure Belli Ac Pacis." Emory International Law Review. Volume 10, Number 1. Spring 1996. 09 Mar. 2005. <<http://www.law.emory.edu/EILR/volumes/spring96/bederman.html>>

Beres, Louis Rene and Col. Yoash Tsiddon-Chatto. "Reconsidering Israel's Destruction of Iraq's Osiraq Nuclear Reactor." Israel's Strike Against the Iraqi Nuclear Reactor 7 June, 1981: A Collection of Articles and Lectures. Ed. Moshe Fuksman-Sha'al. Jerusalem: Menachem Begin Heritage Center, 2003.

Bin Laden Tape. 12 Feb. 2003. Reported in BBC News World Edition. 08 Mar. 2005. <http://news.bbc.co.uk/2/hi/middle_east/2751019.stm>.

Calculating the New Global Nuclear Terrorism Threat. 01 Nov. 2001. International Atomic Energy Agency. 08 Mar. 2005. <http://www.iaea.org/NewsCenter/PressReleases/2001/nt_pressrelease.shtml>.

Comprehensive Test Ban Treaty. Greenpeace. 21 Dec. 2004. <<http://archive.greenpeace.org/comms/nukes/ctbt/read9.html>>.

Ferraro, Vincent. Principles of Just War. Mt. Holyoke University. 14 Dec. 2004. <<http://www.mtholyoke.edu/acad/intrel/pol116/justwar.htm>>.

Grotius, Hugo. The Law of War and Peace, Book. II, Ch. 1 (1949). Rpt. in Ziyad Motala. "Self-Defense in International Law, the United Nations, and the Bosnian Conflict." University of Pittsburgh Law Review. Volume 10, Number 75. 1995.

Iran Nuclear Omissions Worry UN. 24 Feb. 2004. British Broadcasting Corporation (BBC) News. 08 Mar. 2005. <http://news.bbc.co.uk/2/hi/middle_east/3517139.stm>.

Israel. Office of the Prime Minister, Ministry of Foreign Affairs and Atomic Energy Commission The Iraqi Nuclear Threat – Why Israel Had to Act. Jerusalem: 1981.

Ivri, Major General David. "The Attack on the Osiraq Nuclear Reactor – Looking Back 21 Years Later." Israel's Strike Against the Iraqi Nuclear Reactor 7 June, 1981: A Collection of Articles and Lectures. Ed. Moshe Fuksman-Sha'al. Jerusalem: Menachem Begin Heritage Center, 2003.

McKinnon, Dan. Bullseye One Reactor. San Diego: House of Hits, 1987.

Naji, Kasra. Iran Says It Won't Change Nuclear Policy. 21 Jun. 2003. Cable News Network (CNN). 08 Mar. 2005.
<<http://edition.cnn.com/2003/WORLD/meast/06/21/iran.nuclear/>>.

Ne'eman, Yuval. "My Involvement with the Osiraq Affair." Israel's Strike Against the Iraqi Nuclear Reactor 7 June, 1981: A Collection of Articles and Lectures. Ed. Moshe Fuksman-Sha'al. Jerusalem: Menachem Begin Heritage Center, 2003.

Nuclear North Korea. 11 Feb. 2005. Reported in CBC News. 24 Apr. 2005.
<http://www.cbc.ca/news/background/northkorea/nuclear.html>

Perlmutter, Amos and Michael I. Handel and Uri Bar-Joseph. Two Minutes Over Baghdad. London: Corgi, 1982.

Perlmutter, Amos and Michael I. Handel and Uri Bar-Joseph. Two Minutes Over Baghdad. Second Edition. London: Cass, 2003.

St. Augustine of Hippo. Against Faustus the Manichaeon. Rpt. in Augustine: Political Writings. Eds. Michael W. Tkacz and Douglas Kries, 1994.

Treaty on the Non-Proliferation of Nuclear Weapons, Article X, Section 1. Rpt. in Federation of American Scientists. 08 Mar. 2005.
<<http://www.fas.org/nuke/control/npt/text/npt2.htm>>

United Nations Charter, Article 51.

United Nations. International Atomic Energy Agency. Calculating the New Global Nuclear Terrorism Threat. November 1, 2001. 08 Mar. 2005.
<http://www.iaea.org/NewsCenter/PressReleases/2001/nt_pressrelease.shtml>

United Nations. International Court of Justice. Military and Paramilitary Activities in and Against Nicaragua (*Nicaragua v. United States of America*). 1986.

United Nations. World Health Organization. Health Consequences of the Chernobyl Accident. 08 Mar. 2005.
<http://www.who.int/ionizing_radiation/research/chernobyl/en/>

United States. Council on Foreign Relations. Terrorism: Questions & Answers: Dirty Bombs. 07 Jan. 2005. 08 Mar. 2005.
<<http://cfrterrorism.org/weapons/dirtybomb2.html>>.

United States. Department of Health and Human Services, Centers for Disease Control and Prevention and the National Cancer Institute. A Feasibility Study of the Health

Consequences to the American Population from Nuclear Weapon Tests Conducted by the United States and Other Nations. Volume 1. Washington: August 2001. 14 Dec. 2004.
<<http://www.cdc.gov/nceh/radiation/fallout/falloutreport.pdf>>

United States. Department of Homeland Security and National Academy of Science. Radiological Attack: Dirty Bombs and Other Devices. News and Terrorism: Communicating in a Crisis. 08 Mar. 2005.
<[http://nae.edu/NAE/pubundcom.nsf/weblinks/CGOZ-646NVG/\\$file/radiological%20attack.pdf](http://nae.edu/NAE/pubundcom.nsf/weblinks/CGOZ-646NVG/$file/radiological%20attack.pdf)>

United States. Department of State Office of the Coordinator for Counterterrorism. Patterns of Global Terrorism. Washington: 2004. 08 Mar. 2005.
<<http://www.state.gov/s/ct/rls/pgtrpt/2003/31711.htm>>

United States. Federal Emergency Management Agency. Nuclear Attack Planning Base – 1990 Final Project Report. Washington D.C.: April 1987.

United States. Iraq Survey Group. Comprehensive Report of the Special Advisor to the DCI on Iraq's WMD: Nuclear Key Findings. Volume II. 30 Sep. 2004. 08 Mar. 2005.
<http://www.globalsecurity.org/wmd/library/report/2004/isg-final-report/isg-final-report_vol2_nuclear-01.htm>

United States. Senate. The Israeli Air Strike and Related Issues. Hearings Before the Committee on Foreign Relations, United States Senate, Ninety-seventh Congress, First Session, June 18, 19, and 25, 1981. Washington: 1981.

Yongbyon [Nyongbyon]. GlobalSecurity.org. 08 Mar. 2005.
<<http://www.globalsecurity.org/wmd/world/dprk/yongbyon.htm>>.

ENDNOTES

¹ The definition of terrorism varies widely in academic and professional literature. It is not the intention of this author to precisely define what 'Terrorism' is in this paper except to present it as something that is inimical to the interests of the United States and thus something to be opposed by American foreign policy-making circles. This author acknowledges that the use of the word 'illegitimate' leaves a vague opening as to how one can identify terrorism acts apart from those acts that are legitimate under any of the international treaties or charters. The quote, "One person's terrorist is another's freedom fighter," remains valid in the academic environment. However, for this paper, the designation of individual terrorist groups, persons, or acts are up to the reader but the focus remains on state and non-state groups that desire to detonate a nuclear device inside the territorial US or against one of her allies.

² Comprehensive Test Ban Treaty. Greenpeace. Accessed 21 Dec. 2004.
<<http://archive.greenpeace.org/comms/nukes/ctbt/read9.html>>.

³ Definitions are warranted at this point. 'Nuclear weapons' and 'weapons-grade material' are defined as a mass of Uranium or Plutonium that is ready to be or already have been installed onto a delivery platform and detonated. Such material has to contain either Uranium (U^{235}) or Plutonium (P^{239}). 'Nuclear equipment' constitutes of devices that enables the handling and manufacture of nuclear material, including weapons-grade material. One such example would be centrifuges used to artificially make Uranium (U^{235}) or Plutonium (P^{239}). 'Nuclear material' is any matter that has the potential to be converted into weapons-grade material but has not yet been done. Although they are still highly radioactive and lethal, any other isotope than U^{235} or P^{239} qualifies to be 'nuclear material' since they are not weapons-grade and cannot be used to sustain a fission reaction.

⁴ US interests include preventing harm from coming to any portion of the US territories, populations, industrial centers, military equipment, facilities and troops, commercial lines of communication, economic infrastructure, seats of governments, command and control facilities, intelligence assets, agricultural areas, as well as of those nations that America considers to be one of its allies.

⁵ United States. Department of Homeland Security and National Academy of Science. Radiological Attack: Dirty Bombs and Other Devices. News and Terrorism: Communicating in a Crisis. Accessed 08 Mar. 2005. <[http://nae.edu/NAE/pubundcom.nsf/weblinks/CGOZ-646NVG/\\$file/radiological%20attack.pdf](http://nae.edu/NAE/pubundcom.nsf/weblinks/CGOZ-646NVG/$file/radiological%20attack.pdf)>

⁶ Quoted in Calculating the New Global Nuclear Terrorism Threat. United Nations International Atomic Energy Agency, November 1, 2001.
<http://www.iaea.org/NewsCenter/PressReleases/2001/nt_pressrelease.shtml> Accessed 8 MAR 2005.

Also, "The International Atomic Energy Agency notes that virtually every country has radioactive substances that could be used to make dirty bombs and warns that some countries do not guard these materials adequately. Experts are particularly concerned about the security of nuclear facilities in Pakistan, India, and other developing countries. But the problem is not limited to the developing world; reports have also cited weak protection of spent fuel at U.S. nuclear facilities. A September 2003 General Accounting Office report found that many of the 2 million sources of radioactive material in the United States are poorly monitored and that between 1998 and 2002 there were 1,300 instances in which sealed radiation machines were stolen or lost; most were subsequently recovered." Cited in, Terrorism: Questions & Answers: Dirty Bombs. Council on Foreign Relations, January 7, 2004.
<<http://cfrterrorism.org/weapons/dirtybomb2.html>> Accessed 8 MAR 2005.

⁷ United Nations. International Atomic Energy Agency. Calculating the New Global Nuclear Terrorism Threat. November 1, 2001. Accessed 08 Mar. 2005.
<http://www.iaea.org/NewsCenter/PressReleases/2001/nt_pressrelease.shtml>

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- ⁸ Osama bin Laden said, “We stress the importance of the martyrdom operations against the enemy - operations that inflicted harm on the United States and Israel that have been unprecedented in their history, thanks to Almighty God.” He also quoted the Quran, “Therefore, when ye meet the unbelievers (in fight), smite at their necks.” The above comes from an audio message purported to be by al-Qaeda leader Osama Bin Laden, broadcast on Arab television station al-Jazeera on 11 February 2003. As reported in Bin Laden Tape. 12 Feb. 2003. Reported in BBC News World Edition. Accessed 08 Mar. 2005. <http://news.bbc.co.uk/2/hi/middle_east/2751019.stm>.
- ⁹ United States. Council on Foreign Relations. Terrorism: Questions & Answers: Dirty Bombs. 07 Jan. 2005. Accessed 08 Mar. 2005. <<http://cfrterrorism.org/weapons/dirtybomb2.html>>.
- ¹⁰ United States. Department of State Office of the Coordinator for Counterterrorism. Patterns of Global Terrorism. Washington: 2004. Accessed 08 Mar. 2005. <<http://www.state.gov/s/ct/rls/pgtrpt/2003/31711.htm>>
- ¹¹ Cited on GlobalSecurity.org website. Yongbyon [Nyongbyon]. GlobalSecurity.org. Accessed 08 Mar. 2005. <<http://www.globalsecurity.org/wmd/world/dprk/yongbyon.htm>>.
- ¹² Naji, Kasra. Iran Says It Won't Change Nuclear Policy. 21 Jun. 2003. Cable News Network (CNN). Accessed 08 Mar. 2005. <<http://edition.cnn.com/2003/WORLD/meast/06/21/iran.nuclear/>>. Also, Iran Nuclear Omissions Worry UN. 24 Feb. 2004. British Broadcasting Corporation (BBC) News. Accessed 08 Mar. 2005. <http://news.bbc.co.uk/2/hi/middle_east/3517139.stm>.
- ¹³ Ne’eman, Yuval. “My Involvement with the Osiraq Affair.” Israel’s Strike Against the Iraqi Nuclear Reactor 7 June, 1981: A Collection of Articles and Lectures. Ed. Moshe Fuksman-Sha’al. Jerusalem: Menachem Begin Heritage Center, 2003. pp. 53-58.
- ¹⁴ United States. Federal Emergency Management Agency. Nuclear Attack Planning Base – 1990 Final Project Report. Washington D.C.: April 1987. pp. vii - xii. Specifically, 19% of the US population lives in an area that is assessed as being Very High Direct Effects Risk Areas. A further 13% live in High Direct Effects Risk Areas and 21% live in Medium Direct Effects Risk Areas. Another 19% live in Low Direct Effects Risk Areas. Combined, this is 129.7 million persons.
- ¹⁵ Roentgen (R): a unit of exposure to x-rays or gamma rays. One roentgen is the amount of gamma or x-rays needed to produce ions carrying 1 electrostatic unit of electrical charge in 1 cubic centimeter of dry air under standard conditions. Generally, exposure to over 100 R in a short time will result in acute radiation syndrome (a.k.a. radiation sickness). The reason for this is elements such as strontium 90, cesium 137, and carbon 14 are released in a fall out. Organic and inorganic matter will absorb and retain any of those elements. For a detailed listing of the effects of fallout, see United States. Department of Health and Human Services, Centers for Disease Control and Prevention and the National Cancer Institute. A Feasibility Study of the Health Consequences to the American Population from Nuclear Weapon Tests Conducted by the United States and Other Nations. Volume 1. Washington: August 2001. Accessed 14 Dec. 2004. <<http://www.cdc.gov/nceh/radiation/fallout/falloutreport.pdf>>
- ¹⁶ Chernobyl Incident: While the blast effects of Chernobyl did not account for most of the deaths, it was the fallout of the incident led to a literally unaccountable number of adults and children receiving thoracic cancer, radioactive sickness, and other short and long-term effects of exposure to radioactivity. Source: United Nations. World Health Organization. Health Consequences of the Chernobyl Accident. Accessed 08 Mar. 2005. <http://www.who.int/ionizing_radiation/research/chernobyl/en/>

Goiânia Incident: “The accidental contamination of Goiânia, a major city in Brazil, with a medical radiation source exemplifies the potential for a terrorist group to wreak havoc on an urban center. In September 1987, scrap scavengers broke into an abandoned radiological clinic and stole a highly

radioactive cesium-137 source and moved it to a junkyard for sale as scrap. Workers broke open the encasement and cut up the 20-gram capsule of cesium-137 into pieces. The valuable-looking scrap was then distributed to friends and family of workers around the city. Fourteen people were overexposed, and 249 contaminated. Four subsequently died. More than 110,000 people had to be continuously monitored. To decontaminate the area, 125,000 drums and 1470 boxes were filled with contaminated clothing, furniture, dirt and other materials; 85 houses had to be destroyed.” Cited in United Nations. International Atomic Energy Agency. Calculating the New Global Nuclear Terrorism Threat. November 1, 2001. Accessed 08 Mar. 2005.

<http://www.iaea.org/NewsCenter/PressReleases/2001/nt_pressrelease.shtml>

- ¹⁷ Bederman, David J. “Reception of the Classical Tradition in International Law: Grotius' De Jure Belli Ac Pacis.” Emory International Law Review. Volume 10, Number 1. Spring 1996. Accessed 09 Mar. 2005. pp. 31-32. <<http://www.law.emory.edu/EILR/volumes/spring96/bederman.html>>

- ¹⁸ St. Augustine of Hippo. Against Faustus the Manichaean. Rpt. in Augustine: Political Writings. Eds. Michael W. Tkacz and Douglas Kries, 1994. pp. 221-222.

- ¹⁹ Aquinas, Thomas. The Summa Theologicae. Part II, Question 40. Benzinger Brothers Edition, 1947. Trans. by Fathers of the English Dominican Province. 09 Mar. 2005. <<http://ethics.acusd.edu/Books/Texts/Aquinas/JustWar.html>>

- ²⁰ Ackerman, David M. International Law and the Preemptive Use of Force Against Iraq. Washington, DC: Library of Congress, 2002. p. 2.

- ²¹ Grotius, Hugo. The Law of War and Peace, Book. II, Ch. 1 (1949). Rpt. in Ziyad Motala. “Self-Defense in International Law, the United Nations, and the Bosnian Conflict.” University of Pittsburgh Law Review. Volume 10, Number 75. 1995. p. 57.

- ²² U.N. Charter, Article 51.

- ²³ Beres, Louis Rene and Col. Yoash Tsiddon-Chatto. “Reconsidering Israel’s Destruction of Iraq’s Osiraq Nuclear Reactor.” Israel’s Strike Against the Iraqi Nuclear Reactor 7 June, 1981: A Collection of Articles and Lectures. Ed. Moshe Fuksman-Sha’al. Jerusalem: Menachem Begin Heritage Center, 2003. pp. 59-60.

- ²⁴ Ferraro, Vincent. Principles of Just War. Mt. Holyoke University. Accessed 14 Dec. 2004. <<http://www.mtholyoke.edu/acad/intrel/pol116/justwar.htm>>.

- ²⁵ United States. Iraq Survey Group. Comprehensive Report of the Special Advisor to the DCI on Iraq’s WMD: Nuclear Key Findings. Volume II. 30 Sep. 2004. Accessed 08 Mar. 2005. <http://www.globalsecurity.org/wmd/library/report/2004/isg-final-report/isg-final-report_vol2_nuclear-01.htm>

- ²⁶ McKinnon, Dan. Bullseye One Reactor. San Diego: House of Hits, 1987. p. 58.

- ²⁷ Ibid, p. 59.

- ²⁸ Ibid, p. 60.

- ²⁹ Ibid, p. 60.

- ³⁰ Perlmutter, Amos and Michael I. Handel and Uri Bar-Joseph. Two Minutes Over Baghdad. Second Edition. London: Cass, 2003. pp. 42-48.

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- ³¹ Perlmutter, Amos and Michael I. Handel and Uri Bar-Joseph. Two Minutes Over Baghdad. London: Corgi, 1982. p. 362.
- ³² Iraq waged at least four major wars against Israel. In the Israeli War of Independence (1948), up to 18,000 Iraqi troops and 120 artillery pieces were sent against Israel. Iraq's Air Force and 8th Brigade supported the Jordanian infantry in the Six-Day War (1967). During the War of Attrition (1967-1970), Iraq conducted artillery attacks against Israeli villages in the Jordan Valley and joined Syria, Jordan, Saudi Arabia in a joint military command of the 'Eastern Front'. Two Iraqi infantry brigades and some commando units deployed on the Syrian front on the Golan Heights during the Yom Kippur War (1973) Golan Heights. Iraq's Air Force IAF provided supporting attacks. Source: Israel. Office of the Prime Minister, Ministry of Foreign Affairs and Atomic Energy Commission The Iraqi Nuclear Threat – Why Israel Had to Act. Jerusalem: 1981. p. 5.
- ³³ Perlmutter, p. 137. This is a statement of Saddam Hussein made on 19 AUG 1980 as reported by the Iraqi State News Agency.
- ³⁴ Israel. Office of the Prime Minister, Ministry of Foreign Affairs and Atomic Energy Commission The Iraqi Nuclear Threat – Why Israel Had to Act. Jerusalem: 1981. p. 1.
- ³⁵ Ibid. p. 1.
- ³⁶ Ibid. p. 1.
- ³⁷ Ibid. p. 1.
- ³⁸ For a literal invocation of Article 51 in a legal proceeding, see Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America), 1986 International Court of Justice Reports. p. 14.
- ³⁹ Treaty on the Non-Proliferation of Nuclear Weapons, Article X, Section 1. Rpt. in Federation of American Scientists. Accessed 08 Mar. 2005. <<http://www.fas.org/nuke/control/npt/text/npt2.htm>>
- ⁴⁰ Nuclear North Korea. 11 Feb. 2005. Reported in CBC News. 24 Apr. 2005. <http://www.cbc.ca/news/background/northkorea/nuclear.html>
- ⁴¹ Treaty on the Non-Proliferation of Nuclear Weapons, Article X, Section 1. Rpt. in Federation of American Scientists. Accessed 08 Mar. 2005. <<http://www.fas.org/nuke/control/npt/text/npt2.htm>>
- ⁴² United States. Senate. The Israeli Air Strike and Related Issues. Hearings Before the Committee on Foreign Relations, United States Senate, Ninety-seventh Congress, First Session, June 18, 19, and 25, 1981. Washington: 1981. pp. 21-23.
- ⁴³ Ibid. pp. 21-23.
- ⁴⁴ Ibid. pp. 21-23.
- ⁴⁵ Professor Bligh elaborates on this when he wrote, "In January 1981, just five months before the reactor was destroyed, representatives of the IAEA in Vienna carried out an inspection in Iraq and submitted a very favorable report. As they – and the Security Council – saw it, Iraq was using the reactor exclusively for peaceful purposes and not for anything else." Cited in, Israel's Strike Against the Iraqi Nuclear Reactor 7 June, 1981: A Collection of Articles and Lectures. Ed. Moshe Fuksman-Sha'al. Jerusalem: Menachem Begin Heritage Center, 2003. p. 63.

⁴⁶ United States. Senate. The Israeli Air Strike and Related Issues. Hearings Before the Committee on Foreign Relations, United States Senate, Ninety-seventh Congress, First Session, June 18, 19, and 25, 1981. Washington: 1981. pp. 21-23.

⁴⁷ Perlmutter, Amos and Michael I. Handel and Uri Bar-Joseph. Two Minutes Over Baghdad. Second Edition. London: Cass, 2003. p. 97.

⁴⁸ This is evident when the US voted in favor of UNSC Resolution 487 which condemned Israel as an aggressor in 1981. However, in 1989, the US voted against UN General Assembly A/RES/44/121 which sought to condemn Israel as an aggressor. Cited in, Israel's Strike Against the Iraqi Nuclear Reactor 7 June, 1981: A Collection of Articles and Lectures. Ed. Moshe Fuksman-Sha'al. Jerusalem: Menachem Begin Heritage Center, 2003. p. 63.

⁴⁹ In June 1991, during a visit to Israel after the Gulf War, then-Defense Secretary Richard Cheney gave Major General David Ivri, then commander of the Israeli Air Force, a satellite photograph of the destroyed reactor. On the photograph, Cheney wrote, "For General David Ivri, with thanks and appreciation for the outstanding job he did on the Iraqi Nuclear Program in 1981, which made our job much easier in Desert Storm." This was cited by Major General (res.) David Ivri in, "The Attack on the Osiraq Nuclear Reactor – Looking Back 21 Years Later." Israel's Strike Against the Iraqi Nuclear Reactor 7 June, 1981: A Collection of Articles and Lectures. Ed. Moshe Fuksman-Sha'al. Jerusalem: Menachem Begin Heritage Center, 2003. p. 35.

Also, Professor Louis Rene Beres wrote, "Ironically, the Saudis, too, are in Jerusalem's debt. Had it not been for Prime Minister Begin's resolve to protect the Israeli people in 1981, Iraq's SCUDs falling on Saudi Arabia [during the Gulf War] might have spawned immense casualties and lethal irradiation." Cited in "Reconsidering Israel's Destruction of Iraq's Osiraq Nuclear Reactor." Israel's Strike Against the Iraqi Nuclear Reactor 7 June, 1981: A Collection of Articles and Lectures. Ed. Moshe Fuksman-Sha'al. Jerusalem: Menachem Begin Heritage Center, 2003. p. 60.

⁵⁰ Cited in, "Reconsidering Israel's Destruction of Iraq's Osiraq Nuclear Reactor." Israel's Strike Against the Iraqi Nuclear Reactor 7 June, 1981: A Collection of Articles and Lectures. Ed. Moshe Fuksman-Sha'al. Jerusalem: Menachem Begin Heritage Center, 2003. p. 63.